DIGITAL ACCESS TO SCHOLARSHIP AT HARVARD
DASH.HARVARD.EDU

HARVARD LIBRARY
Office for Scholarly Communication

Political Power, Desegregation, and Employment of Black Schoolteachers

Citation
Freeman, Richard Barry. 1977. Political power, desegregation, and employment of black schoolteachers. Journal of Political Economy 85(2): 299-322.

Published Version
doi:10.1086/260564

Permanent link
http://nrs.harvard.edu/urn-3:HUL.InstRepos:4632237

Terms of Use
This article was downloaded from Harvard University's DASH repository, and is made available under the terms and conditions applicable to Other Posted Material, as set forth at http://nrs.harvard.edu/urn-3:HUL.InstRepos:dash.current.terms-of-use#LAA

Share Your Story

The Harvard community has made this article openly available.
Please share how this access benefits you. Submit a story .

Accessibility

Political Power, Desegregation, and Employment of Black Schoolteachers

Richard B. Freeman

Harvard University

This paper examines the impact of de jure desegregation on education in the South and of increased black voting power on the demand for black schoolteachers in the United States. Because changes in the black share of voters in the post–World War II South are due largely to "exogenous" national laws (the Voting Rights Act of 1965, in particular), the paper provides a unique test of the impact of changes in political power on public decision making. The main finding is that increased black voting power appears to have raised demand for black schoolteachers in the 1960s. There is additional suggestive evidence that black voting power operated in part through election of black officials. The increase in demand due to the changes in voting offset most of the reduction in demand due to desegregation of schooling in the South, averting the potential dire effects of desegregated education on employment of black teachers. Instead of declining, relative employment of blacks in teaching was maintained, and relative incomes rose in the 1950s and 1960s. These results are consistent with the broad "governmental discrimination" hypothesis that much of the economic progress or retrogression of blacks in the United States is explicable in terms of black political power and resultant governmental activity.

The relation between the political power of a group and governmental policies regarding its economic well-being represents an important but rarely explored area of political economy. Recent studies of the impact of pressure groups on economic laws have related measures of the size of groups and of potential gains from desired outcomes to actual decisions such as enactment of occupational licensure laws.[1] A problem with this methodology is that gains to one part of the electorate are losses to another, so that a theory of group formation and political effectiveness,

[1] See Stigler (1975). The relation between political power and economic discrimination is developed at length in Freeman (1974, and in preparation).

[*Journal of Political Economy*, 1977, vol. 85, no. 2]
© 1977 by The University of Chicago. All rights reserved.

usually based on the argument that small groups (such as producers) will coalesce to take advantage of the general public, is needed for empirical implementation. The results of such studies have been mixed, presumably because of the difficulty in obtaining appropriate measures of the political effectiveness of a group relative to the general public.[2]

This paper uses the post–World War II change in the voting rights of black Americans to examine the impact of a group's political power on governmental decisions in a very different manner. It relates the black share of the electorate and changes in the share of the electorate to state and local demands for black schoolteachers in the 1950–70 period. Because changes in the black electorate in the South were due largely to "exogenous" national laws (the Voting Rights Act of 1965, in particular), while changes in the North resulted from "exogenous" migration, the experience of the period provides a distinct test of the impact of the major form of political power in a democracy, voting, on public decision making. Given the importance of teaching as a public-sector job and black concern with education, it is reasonable to expect some of the increased black voting power in this period to be spent on raising demand for black schoolteachers. In addition to the voting power–demand relation, the paper also analyzes, in part to isolate the vote effect, several other institutional and market forces that could be expected to alter the demand and supply of black schoolteachers. The most important of these is segregated schooling in the South, which made teaching the major occupation of highly qualified black Americans in years past. The end of de jure segregation in the 1960s, a decade or more after the 1954 Supreme Court decision, would, by the standard theory of discrimination, be expected to reduce demand for black teachers.[3] On the supply side, increased numbers of black professionals and college graduates in the 1960s and, to a lesser extent, 1950s as well raised the supply of potential teachers, while the growth of industrial and nonacademic government demand for highly skilled blacks following the 1964 Civil Rights Act reduced supply.

The paper is divided into three main sections. In the first I survey briefly some changes in the employment and income of black schoolteachers in the postwar period, the empirical phenomenon under study, and describe the major institutional and market changes likely to have altered the economic standing of black teachers. Section II sets out the supply-demand model which is used to estimate the impact of voting power, desegregation, and other factors on the market and examines the

[2] Thus Stigler obtains uneven and nonrobust results in his model of occupational licensing (p. 131) but reasonable results with trucking legislation (p. 122).

[3] According to the standard theory, because whites have discriminatory tastes from associating with blacks, they will seek to segregate blacks. Segregation of professional services and jobs like teaching will raise demand for blacks in segregated activities. Desegregation will reduce demand (see Colberg 1965, pp. 55–73; and Becker 1971, pp. 56–58).

applicability of the model to available state data. Section III presents empirical estimates of the model using pooled cross-state and changed cross-state data from the 1960 and 1970 Censuses of Population. It relates changes in demand for blacks to two political variables, changes in the black share of the electorate and the black share of elected officials, as well as to the other variables in the model. The black share of elected officials is introduced as an intervening variable to illuminate the route of the voting effect. The paper concludes with a brief summary of findings and their significance.

The major finding of the paper is that increased black voting power appears to have substantially raised demand for black schoolteachers, offsetting most of the reduction in demand due to desegregation. In the South, where segregation had created an especially favorable market for black teachers, some teachers and many principals were displaced, but the potentially disastrous effects of desegregation on teacher employment (predicted by, e.g., Colberg 1965, p. 72) did not occur. In the North, demand increased greatly. As a result, relative employment of blacks in teaching was maintained, and relative incomes rose in the 1950s and 1960s. Since blacks were a minority in all states save the District of Columbia, the apparent effect of their share of the electorate on demand suggests that a group need not form a "minimum winning coalition" to exercise political influence. Presumably because of logrolling and the absence of majority groups with uniform interest, changes in a minority's share of the voting population lead to changes in its share of public "goods," such as teachers' employment.[4] Finally, estimates of the extent to which black voting power affected demand by election of black public officials suggests that, while this was a nonnegligible route of impact, most of the voting effect occurred in other ways.

I. Market for Black Teachers, 1950–70

This section sets out the pattern of change in black teacher incomes and employment in the post–World War II period and describes in some detail the principal market and institutional forces likely to explain observed market developments.

Table 1 provides a broad overview of the changing economic status of black teachers in terms of relative numbers employed and salaries for males and females taken separately. Despite desegregation of school-

[4] By the "minimum winning coalition" argument of Riker (1962), a group must form 50+ percent of the voting population to influence policy. If the group has less than 50 percent, it has no direct input into decisions. With groups divided by color, the black minority would have no say in decisions (as has been true, e.g., of the Catholic minority in Northern Ireland in the 1970s). If, however, the white and black groups have divergent interests and if there is logrolling over issues, there will be no "grand winning coalition," and a minority can have an effect on specific issues.

TABLE 1

BLACK TEACHERS IN THE UNITED STATES, 1950–70

	MALE			FEMALE		
	1950	1960	1970	1950	1960	1970
Number of schoolteachers:						
Black	18,420	32,243	50,548	67,500	101,609	177,240
Total	287,910	441,925	819,243	774,180	1,205,514	1,966,040
Ratio of black to total	0.064	0.073	0.062	0.087	0.084	0.091
Income ($) of schoolteachers:						
Black*	2,477	4,731	7,777	1,923	3,599	6,620
Total	3,465	5,709	8,711	2,265	4,122	6,369
Ratio of black to total	0.71	0.83	0.89	0.85	0.87	1.04

SOURCES.—U.S. Bureau of the Census 1956, tables 3, 11, 20; 1963*b*, tables 3, 25, 26; 1973*a*, tables 2, 16, 17.
* Incomes refer to previous year; 1950 and 1960 are for nonwhites.

ing, which could be expected to reduce demand for black teachers greatly in the period, the table shows that the economic position of black teachers did not deteriorate. In terms of employment, the proportion of teachers who were black remained roughly constant over the two decades: the black share of male teachers rose somewhat in the fifties and fell moderately in the sixties, while the black share of female teachers moved in the opposite direction, producing a constant black proportion of all teachers: 8.1 percent in 1950 and 1960 and 8.2 percent in 1970. With respect to incomes, however, the table shows sizable black advances. Between 1949 and 1969, black male teachers improved their income position relative to white male teachers by 17 percentage points; black female teachers gained 19 percentage points until they had a 4 percent advantage over white female teachers in 1969.

The surprising stability in the ratio of black to total teacher employment and improvement in relative incomes is examined further in table 2, which records the black share of teachers and pupils, ratios of teacher to pupil shares, and the ratio of black to white teacher incomes in selected states.[5] These data indicate that the national employment pattern resulted from divergent and offsetting trends among states, with relative black teacher employment falling unevenly in the South, where it had traditionally been high, and rising in the North.[6] Columns 1–3 docu-

[5] Data for other states are available. The table is limited to a few cases to save space.

[6] Despite the general maintenance of black teacher employment in southern and border states, there was a great decline in the employment of blacks as principals during the period of desegregation. When black and white schools were consolidated, the usual pattern was to retain white principals and administrators and to demote or dismiss their black counterparts. The result was the virtual elimination of black high school principals from many state school systems—a drop from 350 to 36 in Kentucky, from 134 to 14 in Arkansas, and so forth (U.S. Congress 1971). By the time court and federal actions were initiated in the late 1960s/early 1970s to prevent further displacement of black school officials and endangered teachers as well, desegregation and consolidation of school districts had eliminated most black principals in the South.

TABLE 2

BLACK SHARE OF TEACHERS AND PUPILS AND RELATIVE SALARIES* IN SELECTED SOUTHERN AND NORTHERN STATES, 1950–60

SELECTED STATES	SHARES OF TEACHERS AND PUPILS									BLACK/WHITE SALARIES			
	1950			1960			1970			1960†		1970	
	Teachers (1)	Pupils (2)	Ratio (1)/(2) (3)	Teachers (4)	Pupils (5)	Ratio (4)/(5) (6)	Teachers (7)	Pupils (8)	Ratio (7)/(8) (9)	Male (10)	Female (11)	Male (12)	Female (13)
Southern and border:													
Alabama	31.3	37.0	0.84	33.2	34.4	0.97	28.1	32.6	0.86	0.81	1.01	0.97	1.08
Louisiana	26.9	36.4	0.74	31.7	36.0	0.88	30.7	34.7	0.88	0.85	0.99	0.99	1.16
South Carolina	37.2	44.2	0.84	35.0	41.1	0.85	31.3	38.3	0.82	0.84	0.91	0.92	0.98
Virginia	21.7	24.9	0.87	20.7	22.6	0.91	16.4	22.3	0.74	0.92	1.05	0.95	1.14
Kentucky	7.4	6.4	1.16	5.1	6.7	0.75	4.5	8.3	0.54	1.03	1.03	1.15	1.15
Northern:													
Connecticut	0.4	3.0	0.13	1.5	4.5	0.33	2.9	7.0	0.42	...	0.84	1.05	1.06
Illinois	3.4	7.7	0.44	5.6	11.5	0.49	8.2	15.7	0.52	0.91	1.16	1.10	1.22
New York	1.6	6.4	0.26	2.8	8.6	0.32	4.5	13.8	0.32	0.84	0.97	0.98	1.07
Ohio	2.0	6.7	0.30	3.7	8.7	0.43	5.9	10.7	0.55	0.94	1.12	1.09	1.18

SOURCES.—U.S. Bureau of the Census 1953, tables 65, 77; 1963*a*, tables 46, 122, 124; 1972*a*, tables 146, 172, 175, 176.
* Based on salaries calculated as the average of elementary and secondary school median teacher salaries, using the proportion teaching at these levels as weights.
† 1960 data relate to nonwhite/total salaries.

ment the apparent impact of segregation on relative employment in 1950, when the ratio of the black share of teachers to the share of pupils was much higher in the segregated southern and border states, ranging from 1.16 in Kentucky and 0.80 and 0.90 in other segregated states, than in the North (i.e., 0.26 in New York and 0.13 in Connecticut). From 1950 to 1960, when Kentucky and Missouri desegregated, black teacher employment fell sharply in those border states but held steady or increased in the still segregated South and increased in the North. From 1960 to 1970, when the South was finally desegregated, the number of black teachers relative to pupils fell, though only modestly, in the southern states, while increasing in the North and continuing to drop in Kentucky and Missouri. As a result of these divergent patterns, there was a substantial redistribution of black teachers across all states: a sharp decline in the cross-state coefficient of variation in the ratio of the black share of teachers to pupils, from 0.56 (1950) to 0.35 (1960) to 0.28 (1970) for those states with data for each year.

In contrast to the differential change in shares of teachers, the relative income of black teachers increased almost uniformly between 1960 and 1970 (cols. 10–13). The ratio of black to white male teacher incomes rose in the North, in the border areas, and even in such southern states as Louisiana and Alabama, where the incomes of black male teachers virtually equaled those of white male teachers by 1970. As for women teachers, even though the ratio of black to white incomes was approximately unity in 1960, black women made further advances in the sixties, with their incomes surpassing those of whites in most of the states.

Causes of Differences and Change

There are several important institutional and market factors likely to have caused cross-state differences and changes over time in the market for black schoolteachers, of the type observed in tables 1 and 2.

First and of prime concern to this study are changes in black voting power in the 1960s, as reflected in the black share of the electorate. A variety of federal court, Congressional, and executive decisions operated to refranchise blacks in the South, after more than half a century of disfranchisement. Discriminatory voting practices were lessened and eventually eliminated in the 1950s and 1960s, as a result of the Civil Rights Act of 1957, which set up a commission to protect individuals from interference with constitutional rights (such as voting) by private persons, empowered the U.S. attorney general to undertake civil actions in voting cases, and gave federal courts jurisdiction without the complainants having exhausted state remedies; the Civil Rights Act of 1960, which gave the attorney general power to examine voting records and allowed courts to appoint referees to register voters in areas deemed

discriminatory; and finally the 1965 Voting Rights Act, which was expressly designed to remove remaining barriers to the suffrage from states or districts where less than 50 percent of blacks were registered in 1964, presumably as a result of discrimination. This act suspended literacy tests and other qualification requirements in elections and provided for the assignment of federal examiners to register voters and poll watchers to observe voting and the counting of ballots in the states of Alabama, Arkansas, Georgia, Louisiana, Mississippi, South Carolina and Virginia, together with at least 26 counties in North Carolina and one in Arizona.

In addition to explicit governmental acts, the black share of voters was increased by migration to the North. In 1940, just 15 percent of blacks of voting age resided in the North; in 1970, nearly half were citizens of northern states, which by itself more than tripled the potential number of black voters (Freeman 1977, chap. 6). The movement North also, it can be argued, created pressures on Congress and the executive branch to act to reduce voting discrimination in the South (Freeman, in preparation).

The impact of the growth of the black population in the North and refranchisement in the South on the size of the black electorate is examined in table 3, which displays the black proportion of persons of voting age and of registered voters for related states in 1960 and 1970. The number of registered blacks and whites in southern states is estimated by multiplying the number of voting age (U.S. Bureau of the Census 1973*c*, table 614) by the proportion registered in each state (ibid., table 610) for the southern states and, in the absence of registration percentages for other states, by the national nonsouthern average percentage registered in 1966 (U.S. Bureau of the Census 1972*b*, table 92).[7]

The table reveals a sizable gain in the black share of voters, notably in the South. Between 1960 and 1970 the black share of the electorate jumped from 9 percent to 23 percent in South Carolina and from 4 percent to 17 percent in Alabama, despite declines in the relative number of blacks of voting age. In the North, there was a much smaller but still noticeable increase in the black share, so that by 1970 blacks constituted a sizable share of the electorate in the traditionally discriminatory southern states and in the major industrial states of the North.

In a "median voter" model of public decision making, where the state acts as if it were the median voter, the greater the black share

[7] More precisely, for the southern states in which the proportion of blacks and whites registered is available (U.S. Bureau of the Census 1973*b*), I multiplied the estimated population of voting age (table 614) by race to obtain black and white voters. For other states, I multiplied the number of white voters by 0.75, the proportion of whites outside the South who reported voting in 1966, and the number of blacks by 0.69, the comparable figure for blacks, with data from the U.S. Bureau of the Census (1972*b*, table 92).

TABLE 3

BLACK REGISTERED VOTERS BY STATE, 1960–70

STATE	1960		1970	
	% Black of Voting Age	% Black of Registered Voters	% Black of Voting Age	% Black of Registered Voters
Southern:				
Mississippi	35.5	4.3	30.3	27.3
Louisiana	28.2	13.7	26.0	20.7
South Carolina	29.2	9.0	25.4	23.3
Georgia	24.5	14.4	22.7	19.0
Alabama	26.0	7.0	22.1	18.1
North Carolina	20.8	10.1	8.7	12.4
Virginia	18.5	10.2	16.2	14.7
Arkansas	18.2	12.2	14.7	16.1
Tennessee	14.8	12.4	13.4	12.4
Florida	14.7	8.9	11.9	10.2
Texas	11.5	9.8	11.0	12.7
Selected northern:				
Illinois	9.3	8.6	11.0	10.2
New York	8.1	7.5	10.7	9.9
Michigan	8.7	8.1	10.2	9.5
New Jersey	7.7	7.1	9.1	8.5
Missouri	8.1	7.5	8.7	8.1
Ohio	7.6	7.0	8.2	7.6
California	4.2	4.0	6.1	5.7
Indiana	5.3	4.9	6.0	5.5
Connecticut	3.8	3.7	5.0	4.6
Massachusetts	2.0	1.9	2.6	2.4
Wisconsin	1.6	1.5	2.3	2.2
Oregon	0.9	0.9	1.0	1.0
Iowa	0.8	0.8	0.9	0.9
Maine	0.3	0.3	0.2	0.2

SOURCES.—U.S. Bureau of the Census 1973*b*, tables 610, 614; 1972*b*, table 92.
NOTE.—% registered obtained by multiplying numbers of voting age by proportion registered in state for southern states and dividing black by the total. Individual state data used for southern states; northern and western average for other states.

of the electorate, the smaller will be the level of public discrimination and the greater the demand for black workers. Under more complex models of the translation of political power into public jobs, a similar result is likely, though not certain, due to logrolling. In addition, black political power will shape the effect of segregation or desegregation on demand: when blacks count politically, black teachers can expect better treatment under segregation and are less likely to be displaced when schools are desegregated.

The second major institutional change likely to alter demand for black teachers was the end of de jure segregation in southern and border states. Segregation, as noted earlier, would be expected to create a special demand for blacks as teachers, raising their employment and income, and desegregation to reduce demand. While segregation and desegregation of education are not the sole causes of the North-South

differences in the employment of black teachers documented in table 2, they are presumably a major factor. To obtain a quantitative notion of the effect of segregated education and a more detailed picture of regional employment patterns, I have regressed the log of the number of teachers on the log of the number of pupils by race and measures of segregated education and regional dummy variables (*RGN*) for the southern and border states that were segregated by law prior to 1954.[8] The regressions were made separately for black and white teachers and for the ratio of the two, using the equation

$$T = aP + bSEG + cRGN, \tag{1}$$

where T = number of teachers (black, white, or ratio), P = number of pupils (black, white, or ratio), and SEG = index of segregation, defined as the portion of black students in school districts *not* in compliance with the 1954 court order, as given by the Southern Educational Reporting Service (1957–64) and the U.S. Department of Health, Education, and Welfare (1971).

The segregation and region variables are closely related: in 1950 all the states in the southern and border group were de jure segregated; in 1960 most were still largely *not* in compliance; while in 1970 all were in compliance. Hence there is perfect collinearity between the regional dummy and segregation in 1950, strong collinearity in 1960, but no relation in 1970. In the calculation, I treat the three cross-sections as a single pooled sample, with separate intercepts for the years and, in some cases, separate region intercepts as well.

Table 4 presents the segregation index and regional dummy coefficients of interest: lines 1–3 deal with blacks, 4–6 with whites, and 7–9 with the ratio of blacks to whites. In each, results are given first with only the segregated-school index, then with index and the regional dummy, and finally with separate regional intercepts by year as well. The table confirms the hypothesized effect of segregated education on black teacher employment. In line 1, the coefficient on segregated schooling suggests that 100 percent segregation raised black teacher employment nearly threefold [exp (1.05) = 2.86] while reducing white teacher employment (line 4), thereby raising the ratio of black to white teachers (line 7). When the southern and border dummy variable is introduced, it takes up some of the effect of segregation, but most remains attributed to segregated schooling. In 1960, when the variables differ, black teacher employment is relatively greatest in states not in compliance with the law, while in 1970 there remains a southern and border "effect" despite

[8] Seventeen states and the District of Columbia had de jure segregation in 1954. The states were Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, Virginia, Delaware, Kentucky, Maryland, Missouri, Oklahoma, and West Virginia.

TABLE 4

REGRESSION COEFFICIENTS ON SOUTHERN AND BORDER REGIONAL DUMMY VARIABLES AND ESTIMATES OF SCHOOL SEGREGATION

	INDEX OF SEGREGATION	SOUTHERN AND BORDER REGION			
		Total	1950	1960	1970
Black teachers:					
1.	1.05	...	...	...	...
	(0.13)				
2.	0.71	0.43	...	...	...
	(0.15)	(0.12)			
3.	0.33	...	0.66	0.34	0.28
	(0.24)		(0.31)	(0.24)	(0.11)
White teachers:					
4.	−0.14	...	...	...	...
	(0.04)				
5.	−0.10	−0.04	...	...	...
	(0.06)	(0.04)			
6.	−0.00	...	−0.17	−0.07	−0.01
	(0.09)		(0.11)	(0.09)	(0.05)
Ratio of black to white teachers:					
7.	1.16	...	...	...	...
	(0.14)				
8.	0.82	0.57	...	...	...
	(0.16)	(0.14)			
9.	0.42	...	0.72	0.34	0.41
	(0.24)		(0.33)	(0.25)	(0.16)

SOURCES.—U.S. Bureau of the Census 1953, tables 65, 77; 1963*a*, tables 46, 96, 122; 1972*a*, tables 146, 172; U.S. Department of Health, Education, and Welfare 1971.

NOTE.—All regressions include constants, number of pupils (black, white, or ratio of blacks to whites), and time dummies for 1950 and 1960. Teachers and pupils are in logarithmic form. Numbers in parentheses are standard errors of estimate. Number of black pupils in 1960 estimated by multiplying nonwhite number by black share of 5–18-year-olds in U.S. Bureau of the Census 1963*a*, table 96. Number of nonwhites in 1950 used to measure black pupils.

de jure desegregation. When separate state and border dummies are introduced, moreover, though most of the desegregation effect is reflected in the separate dummy variables, there continues to be a "pure" segregated-schooling impact on black teacher employment, though with only marginal statistical significance (line 3). In these calculations, changing segregation is reflected in the time dummies, which are greatest in 1950 and smallest in 1970. The impact of desegregation can thus be measured in one of two ways: with the segregation index or with separate regional dummies for each time period. The latter measure also "picks up" other changing regional factors. Because I am concerned with the effect of black voting power, which also changed largely in the southern and border states, in ensuing regressions, I use the regional dummy as the indicator of segregated education and related regional factors. This minimizes the possibility of misconstruing the voting effect for some other regional change without losing much information about segregated schooling.[9]

[9] If both the regional dummies and the segregation index are included in calculations with other variables, the index drops to negligible significance.

A third determinant of demand in the period was federal courts. Although teachers were not protected by the Equal Employment Opportunity Act until 1972, courts placed legal constraints on the employment policies of desegregating districts in the sixties, outlawing several practices designed to reduce black teacher employment. The U.S. District Court in Mississippi ruled in 1971, for example, that the Columbus Municipal School District could not suddenly require teachers to score above 1,000 on the National Teachers Examination (on which blacks do markedly worse than whites) as a condition of employment in the newly desegregated schools. Other courts have required "clear and convincing" evidence that dismissals of teachers not be discriminatory (U.S. Congress 1971).[10]

Fourth, on the supply side of the market, the increased number of black workers with college training or professional job skills substantially raised the supply of potential teachers in postwar years. At the same time, however, demand for highly qualified blacks in nonteaching occupations also increased markedly, especially after the passage of the 1964 Civil Rights Act and subsequent antidiscriminatory activity.[11] Whether the net effect of those two developments was to increase or decrease supply to elementary and secondary schools remains to be seen.

II. Supply-Demand Model for Analyzing Change

To analyze the effect of the factors described above on employment of black teachers in the 1960s, I develop a small supply-demand model of the market for black schoolteachers. The model focuses on the impact of desegregation and black voting power on demand. It contains two structural equations relating to blacks: one for the demand for blacks relative to all school teachers and one for the supply of blacks to teaching, and an additional equation for the supply of whites to teaching. Let

[10] In the 1969 Singleton case, the court held that, "if there is to be a reduction in the number of principals, teachers, teacher-aides, or other professional staff employed by the school district which will result in a dismissal or demotion of any such staff members, the staff member to be dismissed or demoted must be selected on the basis of objective and reasonable non-discriminatory standards from among all the staff of the school district. In addition if there is any such dismissal or demotion, no staff vacancy may be filled through recruitment of a person of a race, color, or national origin different from that of the individual dismissed or demoted, until each displaced staff member who is qualified has had an opportunity to fill the vacancy and has failed to accept an offer to do so. Prior to such a reduction, the school board will develop or require the development of nonracial objective criteria to be used in selecting the staff member who is to be dismissed or demoted. These criteria shall be available for public inspection and shall be retained by the school district. The school district also shall record and preserve the evaluation of staff members under the criteria. Such evaluation shall be made available upon request to the dismissed or demoted employee" (Appendix A of Singleton v. Jackson Municipal Separate School District, 419, F.2d 1211, 1217 [5th Cir. 1969] [in banco], pp. 1217–18).

[11] For analyses of the changing market for highly qualified blacks see Freeman (1977).

BT = number of black teachers, TT = total number of teachers, TP = total number of pupils, SHR = black share of pupils, $VOTE$ = black share of voters, RGN = dummy variable for the segregated southern and border states, $BSAL$ = income of black schoolteachers, $WSAL$ = income of white schoolteachers, and let all variables be in log form. The demand for black teachers will then be written as

$$BT = f(SHR, TT, VOTE, RGN, BSAL, WSAL). \tag{2}$$

In (2), demand for blacks depends on the total number of teachers in the school system, the black share of pupils and voters, the effect of segregation (and other regional factors) as reflected in the dummy variable for states which practiced de jure segregation in education, and the salary of black and white teachers. When the equation is in logarithmic form, TT is expected to obtain a roughly unit coefficient, reflecting scale homogeneity. The SHR variable is expected to increase demand for black teachers, on the hypothesis that parents and school administrations have some preference for more black (white) teachers when the student body contains more blacks or whites. The $VOTE$ variable will also increase demand, with blacks expected to spend some of their voting power to obtain more favorable treatment in public employment, including the school system. Pressures to displace black teachers are presumably less effective and affirmative action more vigorous as the black share of voters is greater. The salary variables are expected to have opposite coefficients. In some calculations, the total number of pupils rather than teachers is used as the "scale" variable, with modest effect on results.

The supply of black teachers will be made a function of teaching salaries and two additional variables: $BALT$ = alternative salaries available to blacks, and $BQUAL$ = the number of blacks "qualified" to teach, as measured by the number in professional, technical, and kindred jobs.

$$BT = f(BSAL, BALT, BQUAL). \tag{3}$$

With all variables in logarithmic form, the coefficient on $BQUAL$ is expected to be unity and that on $BSAL$ and $BALT$ opposite in sign and of comparable magnitude, given reasonably valid specification of the equation. Similarly, defining $WALT$ as alternative salaries available to whites and $WQUAL$ as the number of "qualified" whites, I obtain the white supply equation

$$WT = f(WSAL, WALT, WQUAL). \tag{4}$$

With the identity linking the actual number of black (bt), white (wt), and all teachers (tt),

$$bt + wt = tt, \tag{5}$$

these equations yield a system with three endogenous variables: *BT*, *BSAL*, *WSAL*, and eight exogenous variables. By substitution, the reduced-form equation for employment is

$$BT = f(SHR, TT, VOTE, DSOUTH, BALT, BQUAL, WALT, WQUAL). \quad (6)$$

Because there are several demand and supply shift variables, the model is overidentified. Accordingly, I estimate the structural equation by simultaneous equation techniques, using the reduced-form equation to summarize the "final" effects of the exogenous variables on black teacher employment.

Analyses and Data

The model (2)–(6) is estimated with pooled cross section and cross-sectional change data for states for 1960 and 1970.[12] Pooling has the advantage of providing two types of variation in the segregation and political-power variables of interest: difference among states in a particular year (e.g., North vs. South, 1960) and within a state over time (South 1960 vs. South 1970). The equations are estimated first for the pooled sample as a whole, with time and regional dummy variables; and then in "cross-sectional change" form, with changes within states from 1960 to 1970 as the key variables. The latter form amounts to having individual-state constant terms in the regressions and thus to the econometric models which ignore cross-state variation to focus on within-state changes.[13]

The prime advantage of the state data set is that changes in black voting power are largely attributable to exogenous federal laws, as described earlier. This minimizes problems of causality—in particular, the danger that some omitted underlying factor such as discriminatory attitudes of whites explains both the black share of voters, given the relative number of persons of voting age, and demand for teachers. An-

[12] Due to lack of salary data for 1950, this year was omitted from the analysis of demand. Since refranchisement and de jure desegregation occurred in the 1960–70 interval in most of the South, the concentration on the 1960s does not seriously mar the analysis.

[13] To see the equivalence of the cross-sectional change and individual-state constant models in the case of two cross sections, consider the observations for a given variable X_{it}, where i relates the state i and $t = 0,1$ to the time periods. The variable that enters the least-squares formulae in the cross-sectional change model is $X_{i2} - X_{i1}$. In the individual-state constant model, all variables are compared with their mean, so that we have $X_{i2} - \bar{X}_i = X_{i2} - 1/2(X_{i1} - X_{i2})$ for period 1. Since in regressions with all variables multiplied by 1/2, the 1/2 term drops out, the models are the same, save for the fact that there are "twice" as many observations in the second. Since a degree of freedom is used up to estimate the individual-state dummy, however, degrees of freedom are the same.

other advantage is that states can be reasonably viewed as separate labor markets, with salaries and employment determined endogenously, as in (2)–(6).

Data on teachers, pupils, and qualified workers (professional, technical, and kindred workers) are taken from the state volumes for the 1960 and 1970 Censuses of Population, as described in the notes to table 5.[14] Because of the predominance of women in teaching and the absence of data on incomes for nonwhite male teachers in several states, female teacher salaries are used to measure *BSAL* and *WSAL*; the number of qualified personnel is estimated as a weighted average of all male and female professionals in a state, using the share of teachers who are men or women as weights. Alternative incomes are measured as a weighted average of the median incomes of all men and women in the state, also using the share of teachers by sex as weights. Nonwhite incomes are used for 1960 due to the absence of black income figures. Regional dummy variables (*RGN*60 for 1960 and *RGN* for 1960 and 1970) are used to measure the effect of desegregation and related regional changes on demand for black teachers. A time variable (*T*60) is entered to reflect national changes in demand over time.

The most difficult factor to measure is the political strength of the black population. In the absence of a theory of group political activity and the translation of such activity into public jobs, there is no obvious theoretically best measure. Empirically, what appears to be the best indicator, the relative number of black voters, suffers from the problem that the number of registered voters in states other than the 11 southern states which had disfranchised blacks prior to 1965 must be estimated along lines described for table 3. However, given the sizable changes in the black share shown in table 3, measurement error is unlikely to mar the analysis seriously.

III. Empirical Results

Regression Results: Pooled Cross Sections

Tables 5 and 6 present the basic regression findings, as obtained by the pooled cross-state calculations.

The reduced-form employment computations in table 5 provide substantial support for the model, in particular for the hypothesized impact

[14] These data have some problems. The census reports nonwhite pupils in 1960 rather than black pupils. To correct for this, I multiplied the number of nonwhite pupils by the proportion of 5–19-year-old nonwhites who were black in each state (U.S. Bureau of the Census 1963*a*, table 96). In 1960 teacher incomes are medians for nonwhites and total workers rather than for blacks and whites. To correct for this, I made some calculations for white incomes estimated by treating the nonwhite and total medians as means and calculating the white "mean."

TABLE 5

REGRESSION ESTIMATES OF REDUCED-FORM EMPLOYMENT EQUATIONS, 1960–70

Equation Number	Constant	*TT(TP)*	*SHR*	*VOTE*	*BALT*	*BQUAL*	*WALT*	*WQUAL*	*T*60	*RGN*	*RGN*60	R^2	SEE
1.	1.47	0.95	0.51	0.17	−0.40	0.39	0.20	−0.34	−0.23	0.12	0.27	0.975	0.192
		(0.29)	(0.20)	(0.10)	(0.27)	(0.17)	(0.37)	(0.26)	(0.18)	(0.12)	(0.11)		
2.	−2.80	0.94*	0.38	0.21	−0.58	0.42	0.55	−0.37	−0.55	0.10	0.32	0.977	0.185
		(0.24)	(0.19)	(0.10)	(0.24)	(0.16)	(0.39)	(0.24)	(0.12)	(0.11)	(0.11)		

SOURCE.—U.S. Bureau of the Census 1963*a*, tables 46, 96, 122, 124; 1964, table 139; 1972*a*, tables 146, 172, 176; 1973*b*, table 344; 1973*c*, tables 610 and 614.

NOTE.—Numbers in parentheses are standard errors of estimate. SEE = standard error for equation. All variables are in logarithmic form except for dummies. *BQUAL*, *BALT* *WALT*, *WQUAL* estimated as weighted average of male and female wages or numbers of professionals, using the fraction of teachers in year by sex and race as weights, as described in text.

* Number of pupils (*TP*) used as scale variable.

TABLE 6

TWO-STAGE LEAST-SQUARES ESTIMATES OF STRUCTURAL-DEMAND EQUATION, 1960 AND 1970, POOLED SAMPLE*

Equation Number	Constant	*TT/TP*	*SHR*	*VOTE*	*BSAL**	*WSAL**	*T*60	*RGN*	*RGN*60	R^2	SEE
1.	4.84	1.03	0.88	0.27	−1.15	0.54	−0.47	0.20	0.36	0.966	0.222
		(0.05)	(0.11)	(0.12)	(0.51)	(0.61)	(0.17)	(0.12)	(0.13)		
2.	1.18	1.01†	0.82	0.30	−1.18	0.68	−0.82	0.15	0.41	0.966	0.219
		(0.05)	(0.11)	(0.12)	(0.50)	(0.61)	(0.16)	(0.11)	(0.13)		
3.	6.33	1.01	0.90	0.24	−0.76		−0.48	0.17	0.33	0.968	0.211
		(0.04)	(0.10)	(0.11)	(0.25)		(0.15)	(0.11)	(0.21)		
4.	6.33	1.01†	0.85	0.26	−0.69		−0.87	0.12	0.37	0.970	0.206
		(0.04)	(0.10)	(0.11)	(0.23)		(0.14)	(0.10)	(0.12)		

* Instrumental variables are supply of qualified blacks, supply of qualified whites, alternative salary of whites, alternative salary of blacks, proportion of female teachers for whites and blacks, and the exogenous variables in the table. All variables are in log form.

† Used *TP* as scale variable.

of the black share of voters on teacher employment. In line 1, which holds fixed total number of teachers, and line 2, which uses total pupils as the scale variable,[15] all the explanatory variables are accorded sensible effects, though the standard errors on the supply of qualified whites and alternative white salaries are relatively large. The critical *VOTE* variable has a sizable coefficient of between 0.17 and 0.21, with a standard error of 0.10, suggesting that a 10 percent increase in the black share of voters increases black teacher employment by about 2 percent. The dummy variables for *RGN* show a substantial drop from 1960 to 1970 of 15 and 22 percentage points in lines 1 and 2, respectively, which can be viewed as reflecting the demise of segregated education (among other factors). The overall time coefficient reveals an increase in the employment of black teachers, all else the same, over the period and when compared with the South dummy, the convergence in regional patterns noted earlier. The number of professionals, raises and alternative salaries reduce employment, as would be expected, given their effect on black teacher wages.

The impact of the black share of voters and other demand-side variables on the level of demand for black teachers was estimated by two-stage least-squares calculations. The results are presented in table 6, with the instrumental variables listed in the note. The calculations support the demand model, with the number of teachers or pupils accorded a roughly unit coefficient, as required of "scale" variables and the black share of pupils and voters, given sizable significant effects on employment. Roughly, demand for black teachers is raised by 9 percent per 10 percent increase in the black share of pupils and by 3 percent per 10 percent gain in black vote power. The coefficient on black teaching salaries is negative and significant in the calculations, while that on white teachers' salaries is positive but smaller and not different statistically. This is consistent with the relatively weak effect accorded *WQUAL* and *WALT* in the previous table. Because of the weak results with *WSAL*, the variable is eliminated in lines 3 and 4, with little effect on the voting coefficient of interest.[16] Finally, the coefficient on southern and border states is large and positive in 1960, presumably as a result of segregation in schooling and drops from 1960 to 1970 by about 27–32 percent, presumably as a result of desegregation.

Turning to the supply of black schoolteachers, two-stage least-squares

[15] These two sets of calculations differ moderately, both conceptually and empirically. With total teachers fixed, the regression focuses on substitution of white for black teachers. With total pupils fixed, the scale of the total teaching work force varies. As will be seen, the two equations yield similar empirical results in most regressions.

[16] Omission of total teacher salaries does not mean that total salaries do not affect black teacher employment, for total salaries will operate through total teacher employment and thus influence black teacher employment.

estimates using the same instruments as in table 5 yield

$$\begin{aligned} BT = {} & -2.61 + \underset{(0.43)}{1.61}\, BSAL - \underset{(0.16)}{1.51}\, ALT + \underset{(0.03)}{0.97}\, BQUAL - \underset{(0.12)}{0.19}\, T60 \\ R^2 = {} & 0.965 \\ \text{SEE} = {} & 0.215 \end{aligned} \tag{7}$$

with regional variables excluded, and

$$\begin{aligned} BT = {} & -3.38 + \underset{(0.61)}{1.77}\, BSAL - \underset{(0.32)}{1.56}\, BALT + \underset{(0.03)}{0.96}\, BQUAL \\ & - \underset{(0.13)}{0.27}\, T60 - \underset{(0.13)}{0.10}\, RGN + \underset{(0.12)}{0.20}\, RGN60 \\ R^2 = {} & 0.969 \\ \text{SEE} = {} & 0.217 \end{aligned} \tag{8}$$

with these variables added in.

The significant positive coefficient on the teacher-salary variable and roughly similar negative coefficient on alternative salaries suggest that the supply of black schoolteachers is responsive to economic incentives. The near-unit coefficient on the supply of qualified personnel indicates further that the increased number of high-level black workers in the sixties shifted the schedule to the right in the expected manner. The relatively small coefficient on *RGN* supports the interpretation of the high black teacher employment in southern and border states in years past as resulting from great demand due to segregated schooling rather than supply factors. Even the greater supply of black teachers in the South, however, may be attributed to the segregated system, which led public Negro colleges to concentrate on preparing teachers for segregated schools.

Regression Results: Cross-sectional Changes

The effect of *changes* in black voting power and in the other variables of the model on changed employment and demand for black teachers, which constitutes the major empirical phenomenon of concern, is examined in table 7, which focuses on changes within states from 1960 to 1970. In these calculations, the logarithmic change in the number of black teachers is regressed on log changes of the various explanatory variables. The regressions are equivalent to an econometric specification which includes individual-state constant terms: each state is compared with its own position rather than with the average position of all states in the sample. By deleting cross-state variation, which is reflected in individual state constants, I am putting the model to a strict test.

TABLE 7

ESTIMATES OF REDUCED-FORM EMPLOYMENT AND STRUCTURAL-DEMAND EQUATIONS USING CROSS-SECTIONAL CHANGE OBSERVATIONS

Equation Number and Model	Constant	*TT*	*VOTE*	*BSAL*	*WSAL*	*DSOUTH*	*SHR*	*BALT*	*BQUAL*	*WALT*	*WQUAL*	R^2	SEE
Reduced-form employment:													
1.	0.45	0.43	0.12	...	...	−0.37	0.16	−0.10	0.51	0.45	0.45	0.965	0.089
		(0.24)	(0.05)			(0.07)	(0.29)	(0.21)	(0.14)	(0.32)	(0.32)		
2.	0.31	0.47	0.11	...	...	−0.39	0.00	−0.21	0.59	...	...	0.962	0.089
		(0.16)	(0.05)			(0.06)	(0.22)	(0.17)	(0.13)				
Structural demand:*													
3.	0.97	0.84	0.14	0.96	−0.23	−0.45	0.35	...	...	...	...	0.927	0.123
		(0.32)	(0.07)	(0.87)	(0.79)	(0.08)	0.27)						
4.	0.95	0.92	0.14	−1.16	...	−0.46	0.33	...	...	...	...	0.926	0.123
		(0.17)	(0.07)	(0.45)		(0.08)	(0.26)						
5.	0.94	1.13†	0.26	−0.83	...	−0.39	0.84	...	...	...	...	0.927	0.123
		(0.23)	(0.07)	(0.47)		(0.08)	(0.24)						

NOTE.—All variables are in logarithmic change form. There are 29 states in the sample.

* In the two-stage least-squares regressions, the instrumental variables were changes in alternative salaries of whites, blacks; female share of black and white teachers; number of black pupils; and number of qualified blacks and whites, along with the exogenous variable in the equations.

† Used *TP* as scale variable.

The resultant employment (lines 1–2) and structural-demand equations (lines 3–5) indicate that the model does a tolerably good job with intrastate change data. In lines 1 and 2, where the reduced-form-employment equation is fit, the key *VOTE* variable obtains a sizable significant coefficient of similar magnitude to that in the pooled cross-section regressions; all the other variables, except those relating to alternative salaries and supply of qualified whites, are accorded reasonable coefficients. The latter have incorrect signs but also large standard errors. From this result and those in previous tables, it appears that the weakest part of the model relates to the supply of white teachers, a peripheral issue in this study. If the *WALT* and *WQUAL* variables are deleted, the fit on other variables of concern is roughly the same as in the initial regressions (see line 2).

Estimates of the basic demand equation of the model, using the instruments described in the table note, are given in lines 3 and 4.[17] In these regressions *BT*, *BSAL*, and *WSAL* (measured by the median income of all teachers) are endogenous. Because of the insignificant coefficient on white teacher salaries shown in line 3 (further evidence that the main weakness in the model is specification of the cross-relation between black and white teachers), *WSAL* is dropped from line 4. In both calculations, the critical voting variable is accorded a large and significant impact of 0.14, somewhat below that in table 6 but still substantial. The other variables obtain sensible coefficients as well. When the scale variable is changed to the number of pupils in line 5, the estimate on *VOTE* nearly doubles, as does that on the black share of pupils. While the estimates are thus sensitive to the precise model structure, the overall result of the cross-sectional change calculations is to lend support to the basic finding that black voting power affected demand for teachers in the period under study.

Black Elected Officials as an Intervening Variable

Accepting the relation between growth of the black share of the electorate and demand for black schoolteachers, what is the mechanism by which the exercise of the franchise affects policy?

Two antipodal possibilities can be identified. At one extreme, it may be argued that only through the election of black state and local officials can the black community influence policies. In this case the relative number of public officials who are black becomes the chief intervening

[17] Using the same instrumental variables as in the table, the change in supply of black teachers equation was

$$BT = \underset{}{-0.25} + \underset{(0.96)}{1.19}\, BSAL - \underset{(0.44)}{0.86}\, BALT + \underset{(0.14)}{1.20}\, BQUAL$$

$$R^2 = 0.836 \qquad \text{SEE} = 0.173,$$

which is consistent with the model.

variable in the voting effect. It should have a sizable impact on demand for teachers and reduce significantly the coefficient on voting. At the other extreme, it may be that blacks influence decisions as readily through election of white public servants as through the election of black politicians. In this case, which may be termed the "politician is a politician is a politician" hypothesis, the coefficient on the black share of voters will be only modestly affected by adding the black share of officials to regressions.

To examine the importance of black elected officials as an intervening variable and to evaluate the two extreme hypotheses, I have obtained data on the number of black state and local elected officials in 1972 (U.S. Bureau of the Census 1972*b*, table 95) and on total number of elected officials in the closest year for which comparable data exist (U.S. Bureau of the Census 1968, table 2). This provides a reasonable measure of the black share of elected officials at the end of the period under study. An estimate of the change in the black share from 1960 to 1970 was made by predicting the black share of officials in 1960 (when published data were not available) by regressing the 1972 share on *RSV*, *RGN*, *BALT*, *BQUAL*, and the proportion of voters in a state favoring Wallace in the 1968 presidential election, and using this to predict 1960 values.[18] The change between the 1972 share and the estimated 1960 share was taken as the measure of changes in the black share of elected officials in the period.[19]

As a first step in analyzing the role of black elected officials, I have regressed the number of black elected officials (*BPOL*) on the black share of voters (*VOTE*), the total number of elected state and local officials (*TPOL*), and a dummy for the southern and border states (*DSOUTH*) in 1970, obtaining

$$\begin{aligned} BPOL &= 0.52 + \underset{(0.11)}{0.74}\ TPOL + \underset{(0.20)}{1.35}\ VOTE - \underset{(0.34)}{0.35}\ DSOUTH \\ R^2 &= 0.716 \\ \text{SEE} &= 0.718, \end{aligned} \tag{9}$$

where all variables are in log form and numbers in parentheses are estimated standard errors. That black voters tend to elect black politi-

[18] In this calculation, 31 states were used, all of those for which good teaching data were available in 1970. Comparable results were obtained when the sample was restricted to the 29 states used in 1960–70 change regressions.

[19] The precise equation is

$$\begin{aligned} RPOL = -24.34 &+ \underset{(0.30)}{1.56}\ VOTE - \underset{(0.17)}{0.23}\ BQUAL + \underset{(0.79)}{3.03}\ BALT \\ &+ \underset{(0.47)}{0.84}\ DSOUTH + \underset{(0.01)}{0.03}\ WAL, \end{aligned}$$

where *WAL* is the proportion of voters for Wallace (in nonlog form),

$$R^2 = 0.829 \qquad \text{SEE} = 0.63.$$

cians is apparent from the large and significant *VOTE* coefficient.

Next, the effect of changes in the relative number of black elected officials on changes in black teacher employment was estimated using the reduced-form-employment equation, with the following result:

$$\begin{aligned} BT = {} & 0.35 + \underset{(0.15)}{0.49}\ TT + \underset{(0.02)}{0.05}\ RPOL - \underset{(0.06)}{0.42}\ RGN \\ & - \underset{(0.20)}{0.07}\ SHR + \underset{(0.13)}{0.59}\ BQUAL - \underset{(0.19)}{0.37}\ BALT \\ R^2 = {} & 0.965 \\ \text{SEE} = {} & 0.085, \end{aligned} \tag{10}$$

where *RPOL* is the relative number of black politicians (= *BPOL* − *TPOL*) and the variables for white alternative salaries and supply were deleted as insignificant. As before, all variables are in log form.

The coefficient on *RPOL* is positive and highly significant, though its magnitude is less than that obtained on *VOTE* in equation (2) of table 7. However, the change in the relative number of black officials varies much more than the change in relative number of voters (*RPOL* has a standard deviation of 1.09; *VOTE* has a standard deviation of 0.39) so that, in this sample at least, the effect of a standard-deviation change in the variables is similar.

The effect of the black share of elected officials on demand for black teachers and its role as an intervening variable in the effect of voting is examined in greater detail in table 8, which presents two-stage least-squares estimates of the structural-demand equation using the cross-section-change data set. In these calculations, *RPOL* is taken as an endogenous variable, estimated with the same instruments as *BSAL* and *WSAL*. Consistent with (10), lines 1 and 2 show that by itself the relative number of black elected officials had a significant effect on the change in demand for school teachers during the 1960s.

When *VOTE* and *RPOL* are included in the same regression (line 3), the results show a moderate decline in the coefficient on *VOTE* (0.08 compared with 0.14 from line 4, table 7), which suggests that roughly 40 percent of the impact of voting is through election of black officials. This estimate appears, however, to be highly dependent on the model structure: if total enrollment rather than total teachers is used as the scale variable, *RPOL* has no impact on the *VOTE* coefficient. Experiments with other models, moreover, in which *RPOL* was taken as exogenous, yielded smaller *VOTE* coefficients and a greater weight placed on *RPOL*. Alternative estimates of *RPOL* would presumably also yield somewhat different allocations of the "political effect." Even if the results were more robust, alternative interpretations of a strong elected-officials effect could of course be given: the variable could be an indicator of the political awareness and organizational strength of black voters

TABLE 8

ESTIMATED EFFECT OF BLACK ELECTED OFFICIALS* ON CHANGED DEMAND FOR BLACK TEACHERS, 1960–70

	Constant	*TT*	*RPOL*	*VOTE*	*BSAL*	*WSAL*	*SHR*	*RGN*	R^2	SEE
1.	0.91	1.00	0.06	...	1.44	0.13	0.23	−0.51	0.922	0.127
		(0.33)	(0.03)		(0.93)	(0.85)	(0.27)	(0.08)		
2.	0.93	0.95	0.06	...	−1.32	...	0.24	−0.50	0.924	0.124
		(0.17)	(0.03)		(0.49)		(0.26)	(0.08)		
3.	0.94	0.92	0.03	0.08	−1.24	−0.03	0.29	−0.48	0.926	0.127
		(0.36)	(0.07)	(0.15)	(1.00)	(0.90)	(0.31)	(0.10)		

* Estimated by two-stage least squares with the same instruments as table 7.

rather than of the effect of officials per se. Overall, the election of black officials appears to be a potentially significant but not dominant means by which the black electorate influences decisions, which deserves more detailed analysis in the future.

IV. Provisos and Conclusions

While the calculations in this paper support the argument that black political power is an important determinant of demand for black schoolteachers and played a role in offsetting the predicted deleterious effect of desegregation on demand, they fall short of a "complete" explanation of the political element in demand in several ways. First, as pointed out in the data section, the available information has numerous shortcomings with regard to incomes and alternative opportunities, especially in 1960, with the consequence that at least some of the variables contain considerable measurement error. Second, the interrelation between the market for white and black teachers was not as well estimated as might be desired. The weakest results pertain to the effect of white teacher salaries, alternative incomes, and supply on demand for blacks. Third, many of the institutional and market features of the teaching profession, such as unionization or the availability of experienced women out of the work force to teach, have been ignored in order to focus on the relation between voting and demand. Fourth, only one mechanism by which voting power is translated into policy, election of black politicians, was evaluated, and its role as an intervening variable is difficult to estimate. Other political forces, such as court rulings, were not treated in the regressions. These provisos and problems not withstanding, however, the evidence does indicate a significant relation between black political power and desegregation and demand for teachers. Such results are consistent with the broad argument that much of the economic history of black Americans can be understood in terms of their voting power, which affects governmental treatment of them and their economic well-being (Freeman 1974, and in preparation).

References

Becker, Gary. *The Economics of Discrimination.* 2d ed. Chicago: Univ. Chicago Press, 1971.

Colberg, M. *Human Capital in Southern Economic Development, 1939–1963.* Chapel Hill: Univ. North Carolina Press, 1965.

Freeman, R. B. "Labor Market Discrimination: A Survey of Findings and Problems." In *Frontiers of Quantitative Economics*, edited by M. Intriligator. Amsterdam: North-Holland, 1974.

———. *Black Elite.* New York: McGraw-Hill, 1977.

———. "The U.S. Discriminatory System." In preparation.

Riker, William. *The Theory of Political Coalitions.* New Haven, Conn.: Yale Univ. Press, 1962.

Southern Educational Reporting Service. *A Statistical Survey, State by State, of School Desegregation—Desegregation in the Southern and Border Area from 1954 to the Present.* Nashville, Tenn.: Southern Educational Reporting Service, 1957–64.

Stigler, G. *The Citizen and the State: Essays on Regulation.* Chicago: Univ. Chicago Press, 1975.

U.S. Bureau of Labor Statistics. *The Social and Economic Status of Negroes in the U.S., 1969.* B.L.S. Report no. 375. Washington: Government Printing Office, 1969.

U.S. Bureau of the Census. *Census of Population: 1950.* Detailed state volumes. Washington: Government Printing Office, 1953.

———. *Census of Population: 1950. Occupational Characteristics.* P–E no. 1B. Washington: Government Printing Office, 1956.

———. *Census of Population: 1960. Detailed Characteristics.* PC(1)–D, individual state volumes. Washington: Government Printing Office, 1963. (*a*)

———. *Census of Population: 1960. Occupational Characteristics.* PC(2)–7A. Washington: Government Printing Office, 1963. (*b*)

———. *Census of Population: 1960. U.S. Summary.* Washington: Government Printing Office, 1964.

———. *1967 Census of Governments.* Topical Studies no. 1, *Popularly Elected Officials of State and Local Governments.* Washington: Government Printing Office, 1968.

———. *Census of Population: 1970. Detailed Characteristics.* PC(1)–D, individual state volumes. Washington: Government Printing Office, 1972. (*a*)

———. *Current Population Reports: The Social and Economic Status of the Black Population in the U.S., 1971.* Ser. P-23, no. 42. Washington: Government Printing Office, 1972. (*b*)

———. *Census of Population: 1970. Occupational Characteristics.* PC(2)–7B. Washington: Government Printing Office, 1973. (*a*)

———. *Census of Population: 1970. Detailed Characteristics, U.S. Summary.* Washington: Government Printing Office, 1973. (*b*)

———. *Statistical Abstract of the United States: 1973.* 94th ed. Washington: Government Printing Office, 1973. (*c*)

U.S. Congress, Senate, Select Committee on Equal Educational Opportunity. *Displacement and Present Status of Black School Principals in Desegregated Districts: Hearings,* pt. 10. 92d Cong., 1st sess., June 14, 1971. Washington: Government Printing Office, 1971.

U.S. Department of Health, Education, and Welfare. News release, June 18, 1971. Washington: Government Printing Office, 1971.